acute vulvovaginitis. Only two patients presented hematuria in the follow-up, one documented to be radiation-induced, and the second was a superficial tumor relapse.
**Conclusions:** Radiochemotherapy after TURB for invasive bladder cancer in very elderly patients with good general condition, is well tolerated and offers good 3-year overall survival rates. The high rates of locally complete response in these patients, makes RCT as an appropriate therapeutic option. The optimal schedule of concurrent chemotherapy needs to be ascertained.

**PO-0762**
**Low-grade gliomas in older adults: treatment patterns and outcomes over the past fifty years**
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**Purpose/Objective:** To identify changes in presentation, treatment and outcomes of older patients with low-grade glioma (LGG) over the past 50 years.
**Materials and Methods:** Records of adults aged 55 or older upon diagnosis at Mayo Clinic between 1960 and 2011 with WHO grade II LGG were reviewed. They were grouped by those diagnosed before (group I: 1960-1989) and after (group II: 1990-2011) the routine use of post-operative MRI.
**Results:** Of the 852 adults diagnosed with LGG in our database, 94 were aged 55 or older. Median follow-up was 11.4 years. Pathologic diagnoses included astrocytoma in 55.3%, mixed oligoastrocytoma in 18% and oligodendroglioma in 26.7%. Gross total resection (GTR) was achieved in 9.6%, radical subtotal resection (rSTR) in 6.4%, subtotal resection (STR) in 20.2% and biopsy only in 63.8%. More patients in the modern era received GTR/rSTR (19.7% versus 7.1%), though the difference was not statistically significant. Median progression-free survival (PFS) was 3.0 years, with 5- and 10-year PFS rates of 31% and 10%, respectively. Median, 5- and 10-year overall survival (OS) was 4.1 years, 43% and 17%, respectively. PFS and OS were not statistically significantly different in group II compared with group I. Factors associated with PFS on univariate analysis included sensory/motor symptoms, astrocytoma histology, contrast enhancement and GTR/rSTR. Factors associated with OS on univariate analysis included astrocytoma histology, deep location, contrast enhancement, GTR/rSTR and PORT. On multivariate analysis, astrocytoma histology, contrast enhancement and GTR/rSTR remained statistically significantly associated with PFS. On multivariate analysis for OS, astrocytoma histology, deep location, contrast enhancement and GTR/rSTR remained statistically significant.
**Conclusions:** This retrospective series of older adults with LGG confirms the poor prognosis of patients with these tumors. Despite reports of improving in outcomes for younger patients treated in the modern era, outcomes have not significantly improved for older patients. If medically safe, strong consideration should be given to maximally safe resection followed by adjuvant therapy.

**PO-0763**
**Single fraction carbon ion radiotherapy for 80 year old and over patients with stage I peripheral NSCLC**
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**Purpose/Objective:** Single-fraction carbon-ion radiotherapy (CIRT) has been used to treat Stage I non-small cell lung cancer (NSCLC) since the dose escalation phase I/II clinical trial started in April 2003. In this study the data for patients 80 year old and over were analyzed to confirm its safety and efficacy.
**Materials and Methods:** Major patient selection criteria: 1. Refused surgery or Inoperable. 2. NSCLC was determined by biopsy. 3. Peripheral lung tumors. 4. Tumors were measurable T1 or T2 tumors as classified by the UICC sixth edition. Custom immobilization devices were used. To improve dose distribution, 3 or 4 ports were used with tilt angles between plus and minus 20°, as only horizontal and vertical carbon-ion beams were available. Each port had an even dosage and was irradiated consecutively. The planning CT also required tilting the patients. For the treatment of planning CIRT, the clinical target volume was defined as gross tumor volume plus 10 mm. The planning target volume was based on the clinical target volume plus 5 mm in the craniocaudal direction. The dose prescription was escalated gradually from 28 Grey Equivalent (GyE) to 50 GyE.
**Results:** We have treated 218 patients by May 2012. Among them, there were 48 males and 22 females, who were 80 years old and over. The median age was 83 years old (range 83-89). The median observation term was 42.7 months. Biopsies proved 45 adenocarcinomas, 24 squamous cell carcinomas, and one non-small cell carcinoma. There were 39 T1 tumors and 31 T2 tumors. The number of inoperable patients was 50. The median treatment dose was 40 GyE (range 28-50). 3-year and 5-year overall survival rates were 72.4% and 39.7%. 3-year and 5-year local control rates were 88.0% and 85.8%. There was no significant statistical difference ($p > 0.05$) between the disease free survival rates for T1 and T2 tumors. There were no grade 3 and over adverse effects for the skin and lung during the acute and late phases. The grade 2 acute lung effect was observed in 3 patients whose each prescribed dose was 34, 44, and 48GyE. Only one patient had the grade 2 acute and late skin effects, whose prescribed dose was 40 GyE.
**Conclusions:** We treated 70 patients, who were 80 years old and over, with single-fraction CIRT. Single-fraction CIRT could be considered safe and efficient treatment options for the elderly with stage I peripheral NSCLC.

**PO-0764**
**Octogenarians with early stage NSCLC undergoing SBRT - same outcomes as younger patients?**
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